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# AGRICULTURAL NOTES

PUBLISHED BY

PORTO RICO AGRICULTURAL EXPERIMENT STATION, MAYAGUEZ  
OFFICE OF FARM MANAGEMENT, FEDERAL BUILDING, SAN JUAN

No. 52 Page 1.

San Juan, Puerto Rico, December, 1930.

## MAYAGUEZ 3, 7, AND 42—THREE CANE VARIETIES

IMMUNE TO MOSAIC.

By R. L. Davis, Agronomist.

Amongst the new varieties resulting from crosses made between P. O. J. 2725 and S. C. 12/4, Mayaguez 3, 7, and 42 are of special promise. None of them have the objectionable early-arrowing habit of P. O. J. 2725 but all of them have inherited resistance to mosaic. Several thousand stools of each of these Mayaguez seedlings have been under observation for five years without finding a single case of mosaic infection.

In resistance to drouth, Mayaguez 7 and 42 have compared well with S. C. 12/4. Satisfactory germinations under drouthy conditions have been secured with Nos. 7 and 42 where failure resulted in plantings of B. H. 10/12. Replantings of 3, 7, and 42 have this year been reported as unnecessary where conditions at time of planting were normal.

The stooling habit of these varieties is intermediate between that of B. H. 10/12 and P. O. J. 2725. They will, therefore, close in somewhat quicker than B. H. 10/12. Excellent stands have been secured in first ratoons of 7 and 42 in the San German valley.

The girth of these canes compares well with that of S. C. 12/4. Mayaguez 42 is somewhat larger-girthed than the others. The strictly erect growth habit of P. O. J. 2878 makes it liable to uprooting due to wind. Mayaguez 7 and 42 become reclining towards maturity and escape with very little uprooting. Mayaguez 3 is more erect than the other two but less so than P. O. J. 2878.

Below are given hand-mill analyses made in the 1930 grinding season on 10 to 15 cane samples collected from rows adjoining those of B. H. 10/12, P. O. J. 2878, and P. O. J. 2725. They indicate that the sucrose content of these canes will be equal to those of the standard varieties now grown in Porto Rico.

|             | Mayaguez<br>11-month<br>Primavera<br>Jan. 4, 1930 | Hormigueros<br>14½-month<br>Gran Cultura<br>Dec. 19, 1929 | Central Rufina<br>15-month<br>Gran Cultura<br>Jan. 10, 1930 | Hormigueros<br>15-month<br>Gran Cultura<br>Jan. 10, 1930 |
|-------------|---|---|---|--|
| Mayaguez 3  | 17.59   | 88.4  |   |  |
| Mayaguez 7  | 16.90   | 85.9  |   |  |
| Mayaguez 42 | 17.85   | 90.0  | 18.76 86.5  | 17.48 89.3 18.86 91.7                                    |
| P.O.J. 2725 | 14.48   | 83.0  | 15.96 85.9  |  |
| P.O.J. 2878 | 16.87   | 88.2  | 16.85 86.3  | 15.58 83.5 17.88 90.0                                    |
| B. H. 10/12 | 15.20   | 92.7  | 17.59 89.2  | 15.47 85.3   |

First tonnage indications on Mayaguez 3, 7, and 42 are presented as follows:

### Single 1/100th-acre plots, Mayaguez

|             | Tons per acre |
|-------------|---------------|
| Mayaguez 3  | 55.0          |
| Mayaguez 7  | 39.8          |
| Mayaguez 42 | 62.3          |
| P.O.J. 2725 | 38.3          |
| P.O.J. 2878 | 31.7          |

Canes were 11-month-old, Primavera, harvested January 15, 1930. They were grown under irrigation. Spacing was 5 x 5 ft., which favored the more prolific P. O. J. canes. In these plots Mayaguez 7 arrowed one week later than P. O. J. 2878, while Mayaguez 3 and 42 did not taper or show signs of arrowing at time of harvest.

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Larger-scale tests on tonnage and sucrose to be made at several centrals during the 1931 grinding season are awaited with considerable interest. Approximately 25 acres each of Mayaguez 7 and 42, and 3 acres of Mayaguez 3 have been planted for grinding in 1932. This will give carload plots for testing milling properties.

The resistance to mosaic, satisfactory germination, large girth and good stooling power of Mayaguez 3, 7, and 42 justify their extensive trial in Porto Rico. It is our recommendation that each interested planter extend these canes until he has enough of each for a trial planting of 1/4 to 1/2 acre. The most certain way of determining their value is to plant them between rows of the variety best suited to each particular locality. Brief descriptions which will serve to identify these new varieties are given as follows:

#### MAYAGUEZ 3

Mayaguez 3 is a long-jointed cane, cinnamon- or rusty-colored towards maturity. It is conspicuous for fine striations or markings similar to those on B. H. 10/12. Buds are long and pointed. Growth is spreading during the first 4 months, later becoming quite erect. Leaf sheaths are hairy, but the leaves shed very freely.

No arrows have been observed in Primavera and Gran Cultura plantings at Mayaguez. Gran Cultura ratoons of Mayaguez 3 have arrowed sparingly at Añasco.

#### MAYAGUEZ 7

Mayaguez-7 joints are of medium length, somewhat longer than those of B. H. 10/12. Cane color is yellowish green, with a maroon red flush. Striations are less conspicuous than those of Mayaguez 3. Buds are long and pointed. Growth is very erect during the first 4 months, and spreading towards maturity. Leaf sheaths are hairy but the leaves shed very freely. Leaves are broad and recurved.

Mayaguez 7 arrows from 4 to 6 weeks later than P. O. J. 2725. Early March Primavera plantings at Mayaguez have not arrowed. February-1930 Primavera at Añasco shows no signs of arrows at present.

#### MAYAGUEZ 42

Mayaguez 42 is a cane with very long joints. Its color is greenish yellow, with a purple flush on the upper part of each internode. Striations are present but not very conspicuous. Buds are round and confined below the growth ring. Growth is semi-erect at first and spreading towards maturity. Leaf sheaths are almost entirely free from hairs. The leaves are broad, dark green, and erect. No arrows or tapering tops have been observed in Primavera or Gran Cultura of Mayaguez-42 plantings at Mayaguez.



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